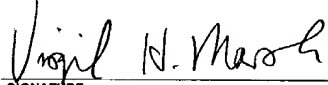


424 Rec'd PCT/PTO 31 JUL 2000

FORM PTO-1390		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER
<b>TRANSMITTAL LETTER TO THE UNITED STATES</b> <b>1 DESIGNATED/ELECTED OFFICE (DO/EO/US)</b> <b>CONCERNING A FILING UNDER 35 U.S.C. 371</b>			ATM-2174 <b>09/601245</b>
INTERNATIONAL APPLICATION NO. PCT/CH99/00056	INTERNATIONAL FILING DATE February 8, 1999	PRIORITY DATE CLAIMED February 26, 1998	
TITLE OF INVENTION  <b>PACKAGING MATERIAL</b>			
APPLICANT(S) FOR DO/EO/US  <b>Manfred GERBER, Jürgen WENDT and Otto HUMMEL</b>			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information			
1 <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371 2 <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371 3 <input type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1) 4 <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19 <sup>th</sup> month from the earliest claimed priority date 5 <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) a <input type="checkbox"/> is submitted herewith (required only if not transmitted by the International Bureau) b <input checked="" type="checkbox"/> has been transmitted by the International Bureau c <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US) 6 <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)). 7 <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) a <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau) b <input type="checkbox"/> have been transmitted by the International Bureau c <input type="checkbox"/> have not been made, however, the time limit for making such amendments has NOT expired d <input type="checkbox"/> have not been made and will not be made 8 <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)) 9 <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)) 10 <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)) <b>Items 11 to 16 below concern other document(s) or information included:</b> 11 <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98. 12 <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included. 13 <input checked="" type="checkbox"/> A FIRST preliminary amendment <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment 14 <input type="checkbox"/> A substitute specification 15 <input type="checkbox"/> A change of power of attorney and/or address letter 16 <input type="checkbox"/> Other items or information			
<p style="text-align: center;">PCT "Antrag"; PCT Notification of Receipt of Record Copy; PCT          "Internationaler Vorläufiger Prüfungsbericht; and Publication No.          WO 99/43570</p>			
<p style="text-align: center;">**Please enter the Preliminary Amendment before calculating the filing fee. **</p>			

533 Rec'd PCT/PTO 31 JUL 2000

U.S. Application NO. (If known, see 37 C.F.R. 1.53) <b>09/601245</b>		INTERNATIONAL APPLICATION NO. <b>PCT/CH99/00056</b>		ATTORNEY'S DOCKET NUMBER <b>ATM-2174</b>	
17. <input checked="" type="checkbox"/> The following fees are submitted				<b>CALCULATIONS</b>	
<b>Basic National Fee (37 C.F.R. 1.492(a)(1)-(5):</b>				<b>PTO USE ONLY</b>	
Search Report has been prepared by the EPO or JPO \$970 00				\$970.00	
International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) \$720 00					
No international preliminary examination fee paid to USPTO (37 C.F.R. 1.482) but international search fee paid to USPTO (37 C.F.R. 1.445(a)(2)) \$790 00					
Neither international preliminary examination fee (37 C.F.R. 1.482) nor international search fee (37 C.F.R. 1.445(a)(2)) paid to USPTO \$1070 00					
International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) \$98.00					
<b>ENTER APPROPRIATE FEE AMOUNT</b>				<b>\$970.00</b>	
Surcharge of \$130 00 for furnishing the oath or declaration later than __ 20 __ 30 months from the earliest claimed priority date (37 C.F.R. 1.492(e))				\$	
<b>Claims</b>	<b>Number Filed</b>	<b>Number Extra</b>	<b>Rate</b>		
Total Claims	-20 =		X \$22 00	\$	
Independent Claims	-3 =		X \$82 00	\$	
Multiple Dependent Claim(s) (if applicable)			X \$270 00	\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				<b>\$970.00</b>	
Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed (Note 37 C.F.R. 1.9, 1.27, 1.28)				\$	
<b>SUBTOTAL =</b>				<b>\$970.00</b>	
Processing fee of \$130 00 for furnishing the English translations later than __ 20 __ 30 months from the earliest claimed priority date (37 C.F.R. 1.492(f))				\$	
<b>TOTAL NATIONAL FEE =</b>				<b>\$970.00</b>	
Fee for recording the enclosed assignment (37 C.F.R. 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31) \$40 00 per property +				\$ 40.00	
<b>TOTAL FEES ENCLOSED =</b>				<b>\$1,010.00</b>	
				Amount to be refunded \$	
				Charged \$	
a. <input checked="" type="checkbox"/> A check in the amount of <b>\$1,010.00</b> to cover the above fees is enclosed					
b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed					
c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <b>06-1110</b> . A duplicate copy of this sheet is enclosed					
NOTE: Where an appropriate time limit under 37 C.F.R. 1.494 or 1.495 has not been met, a petition to revive (37 C.F.R. 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO:				 SIGNATURE	
Virgil H. Marsh Fisher, Christen & Sabol Suite 1401, 1725 K Street, NW Washington, DC 20036				Virgil H. Marsh NAME	
Tel.: 202/659-2000 July 31, 2000				23,083 REGISTRATION NUMBER	

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09/601245

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Docket: ATM-2174

Applicants : Manfred Gerber et al.  
Serial No. : (Not yet assigned)  
Filing Date : July 31, 2000  
Title : Packaging Material

**Preliminary Amendment**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Please amend this application as follows:

**In The Claims:**

Amend Claim 1 as follows:

--1. (Once Amended) Packaging material with hologram-like image,  
characterized in that,  
the packaging material (9) is a multi-layered with a layer structure containing:  
a) a completely or partially embossed metal foil (10) or [metallised] metallized  
plastic film and,  
b) on top, at least in specific areas, a transparent single or multi-layered plastic  
layer (11, 13), where the plastic layer b) forms the outer-lying layer of the  
packaging and the embossed image on the metal foil of [metallised]  
metallized plastic film a) is visible through the transparent areas, with the  
proviso that holograms in the packaging materials are excluded. --

Gerber et al.  
Preliminary Amendment

Amend Claim 2 as follows:

-- 2. (Once Amended) Packaging material according to Claim 1, characterized in that in a packaging made therefrom the plastic layer b) (11, 13) face outwards and functional layers (12, 14) [preferably of plastic and/or paper] are provided on the free side of the metal foil (10). --

In Claim 8, first line, cancel "to 7".

Add the following claims:

-- 10. Packaging material according to Claim 2, wherein in a packaging made therefrom the functional layers (12, 14) are provided on the free side of the metal foil (10) are composed of plastic, paper or both.

11. Packaging material according to Claim 4, wherein the film b<sub>2</sub>) (13) features printed image on one or both sides.

12. Packaging material according to Claim 5, wherein in the film b<sub>2</sub>) (13) features a printed image on one or both sides.

13. Packaging material according to Claim 6, wherein in the film b<sub>2</sub>) (13) features a printed image on one or both sides.

14. Packaging material according to Claim 7, wherein the film b<sub>2</sub>) (13) features a printed image on one or both sides. --

In the Specification:

On page 1, between the Title and the first line, insert therefor:

-- Background Of The Invention

1. Field Of The Invention --.

On page 1, line 5, insert the following:

Gerber et al.  
Preliminary Amendment

-- 2. Background Art --.

On page 1, line 14, insert the following:

-- Broad Description Of The Invention --.

On page 1, line 28, between "foil" and the period, insert --, with the proviso that holograms in the packaging materials are excluded --.

On page 1, line 30, insert the following:

-- Detailed Description Of The Invention --.

On page 6, line 3, insert the following:

-- Brief Description Of The Drawing

In the drawing, Figure 1 is a cross-sectional view of an embodiment of the packaging material according to the invention.

Detailed Description Of The Drawing --.

Remarks

Please enter the claim amendments before calculating the filing fee because the multiple dependency in the claims has been eliminated by the claim amendments.

Respectfully submitted,

*Virgil H. Marsh*

Virgil H. Marsh  
Reg. No. 23, 083

Date: July 31, 2000

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**Packaging Material**

The invention relates to a packaging material with hologram-like image and the use of the packaging material.

5

It is known to provide packaging materials or auxiliary packaging items - such as labels or sealing strips - with holograms as a non-falsifiable means of identifying the product source or as original closure. The production of holograms calls for specially selected materials that are treated in a series of manufacturing steps to yield the desired end product. Forms of packaging bearing holograms give consumers the impression that the contents of the packaging are of high quality. There are also many products that do not require an expensive hologram for protection against falsification, but which one would like to be able to make use of the quality-implication of the hologram on more cost favourable forms of packaging.

15 The object of the present invention is to propose a packaging material which exhibits a hologram-like image on the whole or parts of the packaging, at least on the side facing outwards.

That objective is achieved by way of the invention in that the packaging material is a multi-layered with a layer structure containing:

- a) a completely or partially embossed metal foil or metallised plastic film and,
- b) on top, at least in specific areas, a transparent single or multi-layered plastic layer where the plastic layer b) forms the outer-lying layer of the packaging and the embossed image on the metal foil or metallised plastic film a) is visible through the transparent areas.

25

On a finished form of packaging made from the above packaging material the plastic layer b) faces outwards. Further functional layers e.g. of plastic and/or paper may be provided on the free side of the metal foil.

30

The metal foil may e.g. be an iron, steel, copper, gold and in particular an aluminium foil. The foils may have a thickness of e.g. 7 to 100  $\mu\text{m}$ , usefully 7 to 40  $\mu\text{m}$  and advantageously 8 to 40  $\mu\text{m}$ . The aluminium foils may be of pure aluminium of purity e.g. 98.3% and higher, or they may be of an aluminium alloy, for example of the AlFeSi or AlFeSiMn type. If metallised plastic films are employed, the plastic of the films may be e.g. of polyamides, polyesters, polyolefins, polyvinylchloride, polycarbonates etc. The thickness of the plastic films may be e.g. from 7  $\mu\text{m}$  to 100  $\mu\text{m}$ , preferably from 12  $\mu\text{m}$  to 100  $\mu\text{m}$ . On at least one of the surfaces of the plastic film is a metal layer e.g. of iron, nickel, chromium, copper, silver,

gold, aluminium etc. of thickness for example of 5 to 500 nm (Nanometre) produced by a metallising process such as a physical or chemical thin layer deposition process in vacuum by sputtering etc.

- 5 The metal foil or the metallised plastic film feature an embossed pattern which may cover the whole, some or parts of the surface area. The embossed pattern may be created on the foil by means of embossing rolls. The embossing rolls exhibit the desired embossing pattern and the foil is passed e.g. with a paper coating between the embossing roll and a counter roll. The pattern or image on the embossing roll is thereby transferred to the foil. The
- 10 embossing may be a series of lines, regular or irregular repeated patterns, damask, worm-like, beaten-type pattern etc. all other kinds of pattern are feasible such as script, figures and abstract patterns, pictures, logos or combinations thereof. It is also possible to colour or print onto the embossed areas and, as desired, also the intervening non-embossed areas. This way it is possible to alter the optical effect of embossing e.g. reinforcing, weakening or
- 15 alternating according to the angle of the incident light.

- The single layer of plastic film may be a plastic film produced by calendering e.g. hot-calendering. The thickness of the calendered single layer plastic film may be 20 to 200  $\mu\text{m}$ . Plastics that may be employed are thermoplastics such as polyolefin. The plastic layer may a
- 20 plastic film of at least two layers which has been manufactured by coextrusion. The thickness of each single layer may be 20 to 200  $\mu\text{m}$ . Plastics that may be employed are thermoplastics such as ionomer resins (Surlyn) and polyolefins. The plastic layer may be a thermoplastic deposited as a film on the metal foil by lacquer coating. Useful is a solvent-containing or solvent-free lacquer coating. The lacquer coating may contain or be of a
- 25 polyolefin. A film of thermoplastic may also be deposited on the metal foil by means of a melt extrudate of a thermoplastic. The melt extrudate may be of or contain a polyolefin. The amounts of lacquer or melt extrudate may be from 3 to 80  $\text{g}/\text{m}^2$ , usefully from 30 to 50  $\text{g}/\text{m}^2$ . The film of thermoplastic may be a monofilm or a two, three or multi-layered film or laminate. The film contains or is comprised of polyolefines. The total thickness of the
- 30 thermoplastic film is e.g. 20 to 200  $\mu\text{m}$ , usefully 40 to 150  $\mu\text{m}$ , preferably 90 to 120  $\mu\text{m}$ .

- The plastic layer is usefully transparent or at least transparent in some areas. The plastic layer may be coloured or clear. The plastic layer may bear printing. In the case of lacquer coating, the film may bear a printed or counterprint image. The printing and any non-
- 35 transparent areas of the plastic layer are arranged such that at least some areas of the embossed pattern in the metal foil remain visible through the transparent part of the plastic layer.

Preferred thermoplastics are e.g. polyolefines. Examples of polyolefines are polyethylenes e.g. high density polyethylene (HDPE, density greater than  $0.944 \text{ g/m}^3$ ), medium density polyethylenes (MDPE, density  $0.926\text{--}0.940 \text{ g/m}^3$ ), linear medium density polyethylene (LMDPE, density  $0.926\text{--}0.940 \text{ g/m}^3$ ), linear low density polyethylene (LLDPE, density  $0.916\text{--}0.925 \text{ g/m}^3$ ) or mixtures thereof. Other polyolefines are polypropylenes such as amorphous, crystalline or highly crystalline polypropylene, atactic or isotactic polypropylene and mixtures of the above mentioned polypropylenes, cast polypropylene, poly-1-butene, poly-3-methylbutene, poly-4-methylpentene and copolymers thereof such as polyethylene with vinylacetate, vinylalcohol or acrylic acid. Also worthy of mention are copolymers known as ionomer resins of ethylene with about 11% acrylic acid, methacrylic acid, acrylic esters, tetrafluorethylene or propylene. The corresponding statistical copolymers, block polymers or olefin-polymer-elastomer mixtures also belong to the above mentioned polymers. The films are non-stretched and, preferably, axially or biaxially stretched films. The films may be monolayer materials or a two, three or multi-layered laminate.

15

Useful packaging materials have a layer structure containing:

- a) a wholly or partially embossed metal foil, in particular an aluminium foil,
- b) a multi-layered plastic layer of
  - b<sub>1</sub>) a lacquer coating or a melt extrudate and
  - b<sub>2</sub>) a film containing a polyolefin.

20

Packaging materials preferably exhibit a layer structure containing:

- a) a wholly or partially embossed metal foil, in particular an aluminium foil,
- b) a multi-layered plastic layer of
  - b<sub>1</sub>) a melt extrudate of polyethylene and
  - b<sub>2</sub>) a film containing mainly or comprised of polyethylene.

25

The free side of the metal foil or the metallised plastic film may bear further functional layers. The choice of the functional layers is determined by the use to which the packaging material will be put. The free side of the metal foil or metallised plastic film may e.g. bear one or more further plastic layers and/or a paper layer or a paper layer and one or more plastic layers and/or further metal foils or metallised plastic films. The plastic layers may be deposited by lacquer coating, calendering or by coextrusion. As a rule papers are applied by lacquer coating or adhesive bonding.

35

The packaging material according to the invention may e.g. feature plastic films on the free side of the metal foil or metallised plastic film deposited there by lacquer coating or coextrusion. Advantageously, the plastic layers contain thermoplastics such as the above



mentioned polyolefines, the polyethylenes and polypropylenes being especially suitable. A lacquer or laminate coating of e.g. 3 to 80 g/m<sup>2</sup> may be employed. Plastic films may have a thickness of 20 to 150 µm, usefully 20 to 100 µm and preferably 50 to 80 µm.

- 5 When in the form of packaging made from the said packaging material, the functional layers on the free side of the metal foil or metallised plastic film face the inside of the packaging i.e. towards the contents of the packaging. For that reason it can be advantageous to provide a barrier layer in the functional layers in order to prevent ingress of fluids, vapours, aromas etc. into the functional layer. The outermost layer, facing out from the packaging, and/or the  
10 innermost layer, facing the contents of the packaging, may be a sealable layer. If the layers described are not inherently sealable, then an additional sealing lacquer or sealable film may be employed.

- The packaging material may - according to the make up of the layers - be employed for  
15 various forms of packaging. For example, the packaging materials mentioned are suitable for manufacturing wrapping films, boxes, bags, pouches, self-standing pouches, sachets, goblets, lidding materials for any kind of base parts such as dishes or menu dishes in the food industry or as push-through and blister packs in the pharmaceutical industry and, preferably, as tubes.

20

The present invention concerns therefore advantageously also the use of the packaging material for tubes. A particularly suitable packaging material for tubes has the following make up:

- 25 a<sub>1</sub>) a functional layer

a) a wholly or partially embossed metal foil, in particular an aluminium foil or a wholly or partially embossed metallised plastic film

b) a multi-layered plastic film of

b<sub>1</sub>) a lacquer coating or a melt extrudate and

- 30 b<sub>2</sub>) a film containing a polyolefin.

The film b<sub>2</sub>) may be provided with a printed pattern on one or both sides over part of its surface area.

- 35 The functional layer a<sub>1</sub>) may be a plastic film applied to the metal foil or metallised plastic film by calendering, lacquer coating or by coextrusion.

A packaging material as an example suitable for tube manufacture has the following make up:

- 5 a<sub>1</sub>) a functional layer of a film containing polyolefines, in particular polyethylenes or polypropylenes and of thickness 20 to 150 µm and  
a lacquer coating or a melt extrudate of a polyethylene, in an amount ranging from 3 to 80 g/m<sup>2</sup>,
- a) a wholly or partially embossed metal foil, in particular an aluminium foil or a wholly or partially embossed metallised plastic film of thickness 7 to 100 µm
- 10 b) a multi-layered plastic film of
  - b<sub>1</sub>) a lacquer coating or a melt extrudate of a polyethylene, in an amount of 3 to 80 g/m<sup>2</sup>, and
  - b<sub>2</sub>) a film containing polyolefines. In particular polyethylene or polypropylene and having
- 15 a thickness of 20 to 200 µm.

This concerns a packaging material which, with respect to the metal foil or metallised plastic film, exhibits by way of example a symmetrical arrangement of layers. The thickness of the individual layers may likewise be chosen such that this is also symmetrical. According to the  
 20 invention packaging materials may also have an asymmetric structure. In a tube manufactured from the packaging material the polyolefin film represents the functional layer a<sub>1</sub>) the inner side, and the polyolefin film b<sub>2</sub>) the outer side of the tube and in particular thereby the tube itself as such. The polyolefines are as a rule sealable. For that reason a tube can be manufactured from the packaging material by providing sealing or adhesive seams.  
 25 The packaging material in question is especially suitable for manufacturing the pipe shape of a tube. The attachment of the tube head and the closure of the tube end may likewise be performed by sealing or e.g. by adhesive bonding or welding.

A typical packaging material for tubes exhibits the following layered structure:

- 30 a<sub>1</sub>) a functional layer which faces the inside of the tube, made of a polyethylene film of thickness 40 to 80 µm,  
a lacquer coating or a melt extrudate of polyethylene of 30 to 50 g/m<sup>2</sup>,
- a) a wholly or partially embossed aluminium foil or a wholly or partially embossed
- 35 metallised plastic film of thickness 8 to 40 µm,
- b) a multi-layered transparent plastic layer of
  - b<sub>1</sub>) a lacquer coating or a melt extrudate of polyethylene of 30 to 50 g/m<sup>2</sup>, and

- 6 -

b2) a polyethylene film of thickness from 20 to 200  $\mu\text{m}$ , which forms the outside of the tube.

Figure 1 shows a section through an example of a packaging material 9 according to the invention. The embossed metal foil 10 is coated on the side that later forms the outside of the packaging with a layer 11 of melt extrudate of a low density polyethylene. On top is a film 13 like a three layer film of polyethylene. Possible printing is shown in the form of print 15 on the surface and a counterprint 16. The coating 11 and the film 13 are transparent and the embossing 17 are visible through the plastic layer of melt extrudate 11. On the still free side of the metal foil 10 is a further layer 12 of a melt extrudate and on top of that a further film 14, e.g. a polyethylene film. If a tube or at least the pipe part of a tube is made from the packaging material 9, then the film 14 faces the inside of the tube and hence the contents. The layer 12 and the film 14 may be transparent or opaque. It can be advantageous to provide a barrier layer in or on the film 14, in order to prevent the contents or parts thereof from diffusing into the plastic layer, causing the contents to perish prematurely or delamination of the packaging material. For an observer of a tube made from the packaging material according to the invention the embossed image is visible through the plastic layer, this in addition to any printed image or pattern made up by the printing 15 and counterprint 16. The metallic brightness and the reflection of the metal foil 10, and thereby in particular the reflection influenced by the embossing, lead to optical effects which can be best compared with the visual impressions achieved by holograms. By making use of printing 15 and counterprinting 16 and/or only partially transparent and/or coloured films 13 and/or coloured embossed images 17 in the metal foil 10 a variety of graphic design possibilities can be achieved for the packaging or tube exterior. A packaging material such as that described here may be manufactured by embossing the metal foil 10 using embossing rolls, coating one side with a melt extrudate 11 of the plastic film 11 on one side of the metal foil 10 and, in a further processing step, applying by means of a melt extrudate 12 of the other plastic film 14 to the still free side of the metal foil 10. Of course the coating sequence may be altered or the steps may be carried out simultaneously.

30

35

**Claims.**

1. Packaging material with hologram-like image,  
5 characterised in that,  
  
the packaging material (9) is a multi-layered with a layer structure containing  
a) a completely or partially embossed metal foil (10) or metallised plastic film and,  
10 b) on top, at least in specific areas, a transparent single or multi-layered plastic layer  
(11, 13), where the plastic layer b) forms the outer-lying layer of the packaging and  
the embossed image on the metal foil or metallised plastic film a) is visible through  
the transparent areas.  
  
15
2. Packaging material according to claim 1, characterised in that in a packaging made  
therefrom the plastic layer b) (11, 13) face outwards and functional layers (12, 14)  
preferably of plastic and/or paper are provided on the free side of the metal foil (10).  
20
3. Packaging material according to claim 1, characterised in that the layer structure  
contains  
a) a wholly or partially embossed metal foil (10), in particular an aluminium foil, or a  
wholly or partially embossed metallised plastic film and  
25 b) a multi-layered plastic layer (11, 13) of  
b<sub>1</sub>) a lacquer coating or a melt extrudate (11) and  
b<sub>2</sub>) a film (13) containing a polyolefin.
4. Packaging material according to claim 1, characterised in that the layer structure  
30 contains  
a) a wholly or partially embossed metal foil (10), in particular an aluminium foil,  
or a wholly or partially embossed metallised plastic film and  
b) a multi-layered plastic layer (11, 13) of  
b<sub>1</sub>) a melt extrudate (11) of polyethylene and  
35 b<sub>2</sub>) a film (13) containing polyolefin in particular polyethylene.
5. Packaging material according to claim 1, characterised in that the layer structure  
contains

- a<sub>1</sub>) a functional layer (12, 14),
- 5 a) a wholly or partially embossed metal foil (10), in particular an aluminium foil or a wholly or partially embossed metallised plastic film, and
- b) a multi-layered plastic layer (11, 13) of
  - b<sub>1</sub>) a lacquer coating (11)
  - b<sub>2</sub>) a film (13) containing polyolefines, in particular polyethylenes.
- 10
- 6. Packaging material according to claim 1, characterised in that the layer structure contains the following sequence of layers
  - a<sub>1</sub>) a functional layer (12, 14) of
    - 15 a film (14) containing polyolefines, in particular polyethylenes or polypropylenes of thickness 20 to 150 µm, and
    - a lacquer coating or a melt extrudate (12) of a polyethylene, in amounts ranging from 3 to 80 g/m<sup>2</sup>,
  - a) a wholly or partially embossed metal foil (10), in particular an aluminium foil or a wholly or partially embossed metallised plastic film of thickness 7 to 100 µm,
  - 20 b) a multi-layered plastic film of
    - b<sub>1</sub>) a lacquer coating or a melt extrudate (11) of a polyethylene, in an amount of 3 to 80 g/m<sup>2</sup>, and
    - b<sub>2</sub>) a film (13) containing polyolefines in particular polyethylenes or polypropylenes and having a thickness of 20 to 200 µm.
- 25
- 7. Packaging material according to claim 1, characterised in that the packaging material forms the body of a tube exhibits the following sequence of layers
  - a<sub>1</sub>) a functional layer (12, 14) which faces the inside of the tube, made of a
    - 30 polyethylene film (14) of thickness 40 to 80 µm and,
    - a lacquer coating or a melt extrudate (12) of polyethylene in amounts of 30 to 50 g/m<sup>2</sup>,
  - a) a wholly or partially embossed aluminium foil (10) or a wholly or partially embossed metallised plastic film of thickness 8 to 40 µm,
  - 35 b) a multi-layered transparent plastic layer (11, 13) of
    - b<sub>1</sub>) a lacquer coating or a melt extrudate (11) of polyethylene in amounts of 30 to 50 g/m<sup>2</sup>, and



**Abstract.**

5

Packaging material (9), for example for tube bodies, bearing a hologram-like image.

The packaging material is formed from a multi-layered material with a layer structure containing:

- 10 a) a completely or partially embossed metal foil (10) or metallised plastic film and,  
b) on top, at least in specific areas, a transparent single or multi-layered plastic layer (11, 13),

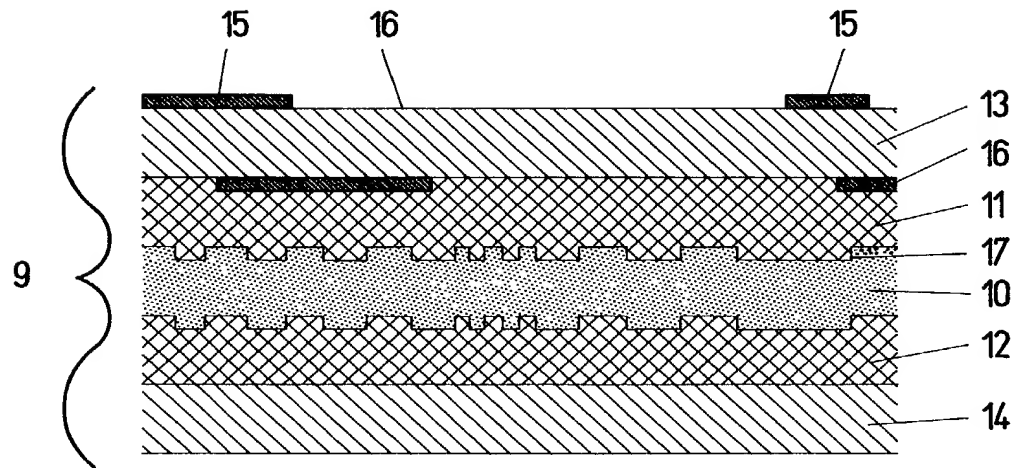
where the plastic layer b) (11, 13) forms the outer-lying layer of the packaging and the embossed image (17) on the metal foil a) (10) is visible through the transparent areas of the

- 15 plastic layer b) (11, 12). The said packaging material gives the observer the impression of viewing a hologram-like image.

(Fig. 1)

20

Fig. 1





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0010/PTO Rev. 6/95  <div style="text-align: center;"><b>DECLARATION</b></div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> Declaration Submitted with Initial Filing         </div> <div style="text-align: center;">OR</div> <div style="text-align: center;"> <input type="checkbox"/> Declaration Submitted After Initial Filing         </div> </div>	U S Department of Commerce Patent and Trademark Office  <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;">Attorney Docket Number</td><td style="width: 50%;"></td></tr> <tr><td>First Named Inventor</td><td></td></tr> <tr><td colspan="2" style="text-align: center;"><b>COMPLETE IF KNOWN</b></td></tr> <tr><td>Application Number</td><td></td></tr> <tr><td>Filing Date</td><td></td></tr> <tr><td>Group Art Unit</td><td></td></tr> <tr><td>Examiner Name</td><td></td></tr> </table>	Attorney Docket Number		First Named Inventor		<b>COMPLETE IF KNOWN</b>		Application Number		Filing Date		Group Art Unit		Examiner Name	
Attorney Docket Number															
First Named Inventor															
<b>COMPLETE IF KNOWN</b>															
Application Number															
Filing Date															
Group Art Unit															
Examiner Name															

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**PACKAGING MATERIAL**  
(Title of the Invention)

the specification of which

☒ is attached hereto  
OR  
☐

was filed on (MM/DD/YYYY)  as PCT International Application Number  and was amended on (MM/DD/YYYY)  (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations, § .56

I hereby claim foreign priority benefits under Title 35, United States Code §119 (a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Copy Attached?	
				YES	NO
98810155.6	Europe	26.02.1998	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCT/CH99/00056	PCT	08.02.1999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority sheet attached hereto

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	
		<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority sheet attached hereto.

## DECLARATION

Page 2

I hereby claim the benefit under Title 35, United States Code §120 of any United States application(s), or §365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations 1.56 which became available between the filing date of the prior application and the national or PCT filing date of this application

U.S. Parent Application Number	PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority sheet attached hereto

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith

Firm Name

Fisher, Christen &amp; Sabol

Payor Number (if applicable)

Name	Registration Number	Name	Registration Number
Virgil H. Marsh	23,083		
Kara M. Armstrong	38,234		

☐ Additional attorney(s) and/or agent(s) named on a supplemental sheet attached hereto

☒ Please direct all correspondence to

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon

Name of Sole or First Inventor:

☐ A petition has been filed for this unsigned inventor

Given Name

Manfred

Middle Initial

Family Name

Gerber

Suffix

Inventor's Signature

Date

24.07.00

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Citizenship

German

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Country

Germany

Applicant Authority

☒

Additional inventors are being named on supplemental sheet(s) attached hereto

Type a plus sign (+) inside this box → ☐

## DECLARATION

## ADDITIONAL INVENTOR(S) Supplemental Sheet

Name of Additional Joint Inventor, if any:

☐ A petition has been filed for this unsigned inventor

Given Name	Jürgen	Middle Initial		Family Name	Wendt	Suffix	
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Post Office Address:							

Hilzingerstr. 21, D-78247 Weiterdingen, Germany

City	Weiterdingen	State		Zip	D-78247	Country	Germany	Applicant Authority	
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Name of Additional Joint Inventor, if any:

☐ A petition has been filed for this unsigned inventor

Given Name	Otto	Middle Initial		Family Name	Hummel	Suffix	
Inventor's Signature						Date	24.07.00
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Post Office Address:							

Schubertstr. 17, D-78224 Singen, Germany

City	Singen	State		Zip	D-78224	Country	Germany	Applicant Authority	
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Name of Additional Joint Inventor, if any:

☐ A petition has been filed for this unsigned inventor

Given Name		Middle Initial		Family Name		Suffix	
Inventor's Signature						Date	
Residence: City		State		Country		Citizenship	
Post Office Address:							

City		State		Zip		Country		Applicant Authority	
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Name of Additional Joint Inventor, if any:

☐ A petition has been filed for this unsigned inventor

Given Name		Middle Initial		Family Name		Suffix	
Inventor's Signature						Date	
Residence: City		State		Country		Citizenship	
Post Office Address:							

City		State		Zip		Country		Applicant Authority	
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Name of Additional Joint Inventor, if any:

☐ A petition has been filed for this unsigned inventor

Given Name		Middle Initial		Family Name		Suffix	
Inventor's Signature						Date	
Residence: City		State		Country		Citizenship	
Post Office Address:							

City		State		Zip		Country		Applicant Authority	
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Name of Additional Joint Inventor, if any:

☐ A petition has been filed for this unsigned inventor

Given Name		Middle Initial		Family Name		Suffix	
Inventor's Signature						Date	
Residence: City		State		Country		Citizenship	
Post Office Address:							

City		State		Zip		Country		Applicant Authority	
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